

ABSTRACT

5 A low dielectric constant, patterned, nanoporous material and a method of forming the material. The material is formed by depositing a layer onto a substrate, said layer comprising a reactive organosilicate material, a porogen, an initiator, and a solvent; exposing portions of the layer to energy (e.g., thermal energy or electromagnetic radiation) to change the solubility of portions of the organosilicate material with respect to the solvent; selectively removing more soluble portions of the layer to generate a relief
10 pattern; and decomposing the porogen to thereby generate a nanoporous organosilicate layer.

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